



Oil & Gas Industry Day

March 1, 2016

Utah State Tax Commission



Disclaimer

Forecasted numbers are opinions of value and are subject to significant economic factors unknown or not reported as of January 1, 2016.



Oil & Gas Production/Water Disposal

Discount Rate

Comparable Companies

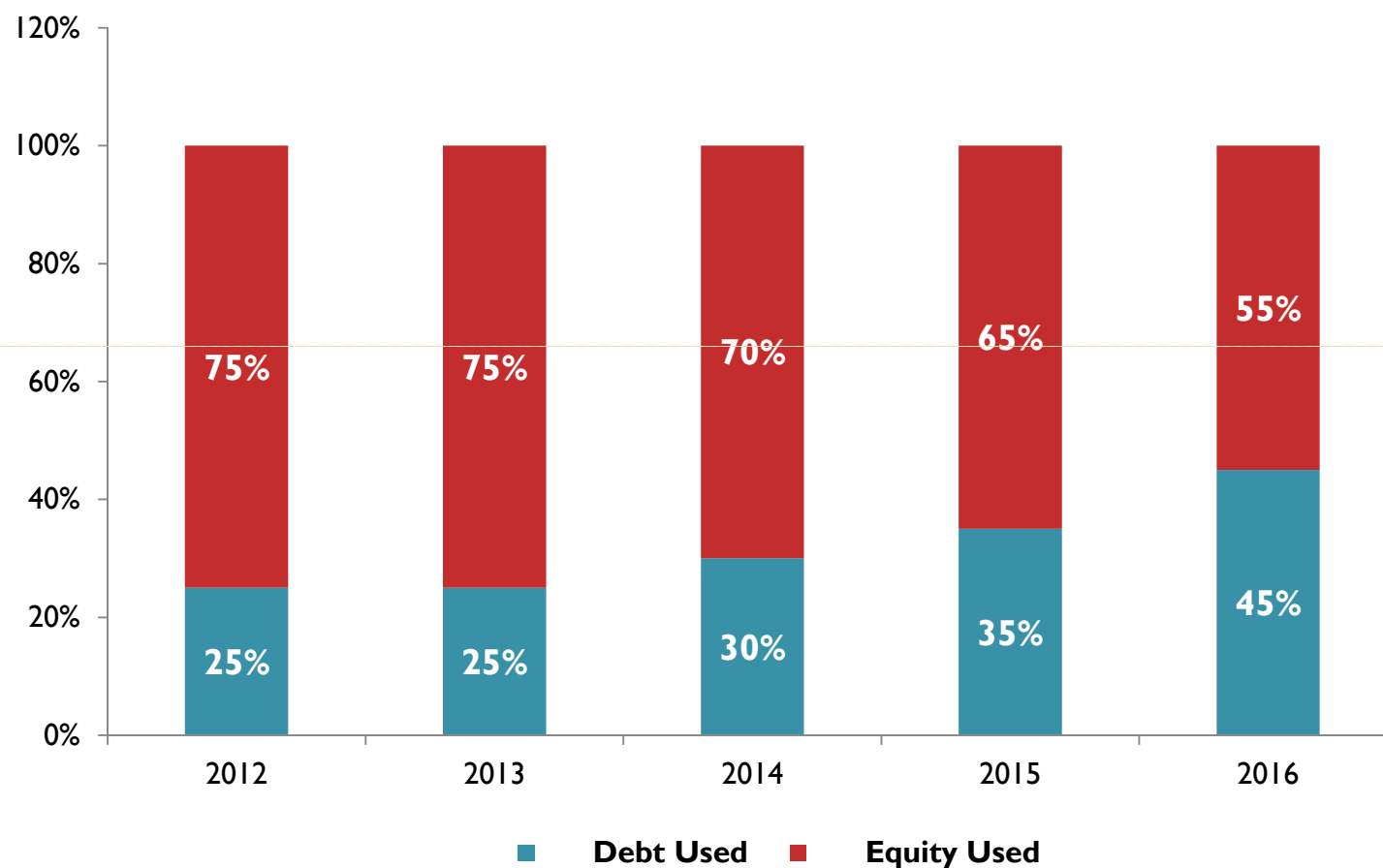
2015

- ABRAXAS PETROL
- BILL BARRETT
- CONTINENTAL RES
- EARTHSTONE ENERGY
- EMERALD OIL INC
- ENCANA CORP.
- **ESCALERA RESOURCES**
- LEGACY RESERVES
- LINN ENERGY
- MATADOR RESOURCES
- NEWFIELD EXPLORATION
- PIONEER NATURAL RES.
- QEP RESOURCES
- RESOLUTE ENERGY CORP
- ROYAL ENERGY INC
- ULTRA PETROLEUM CORP
- WARREN RESOURCES
- WHITING PETROLEUM
- WPX ENERGY, INC

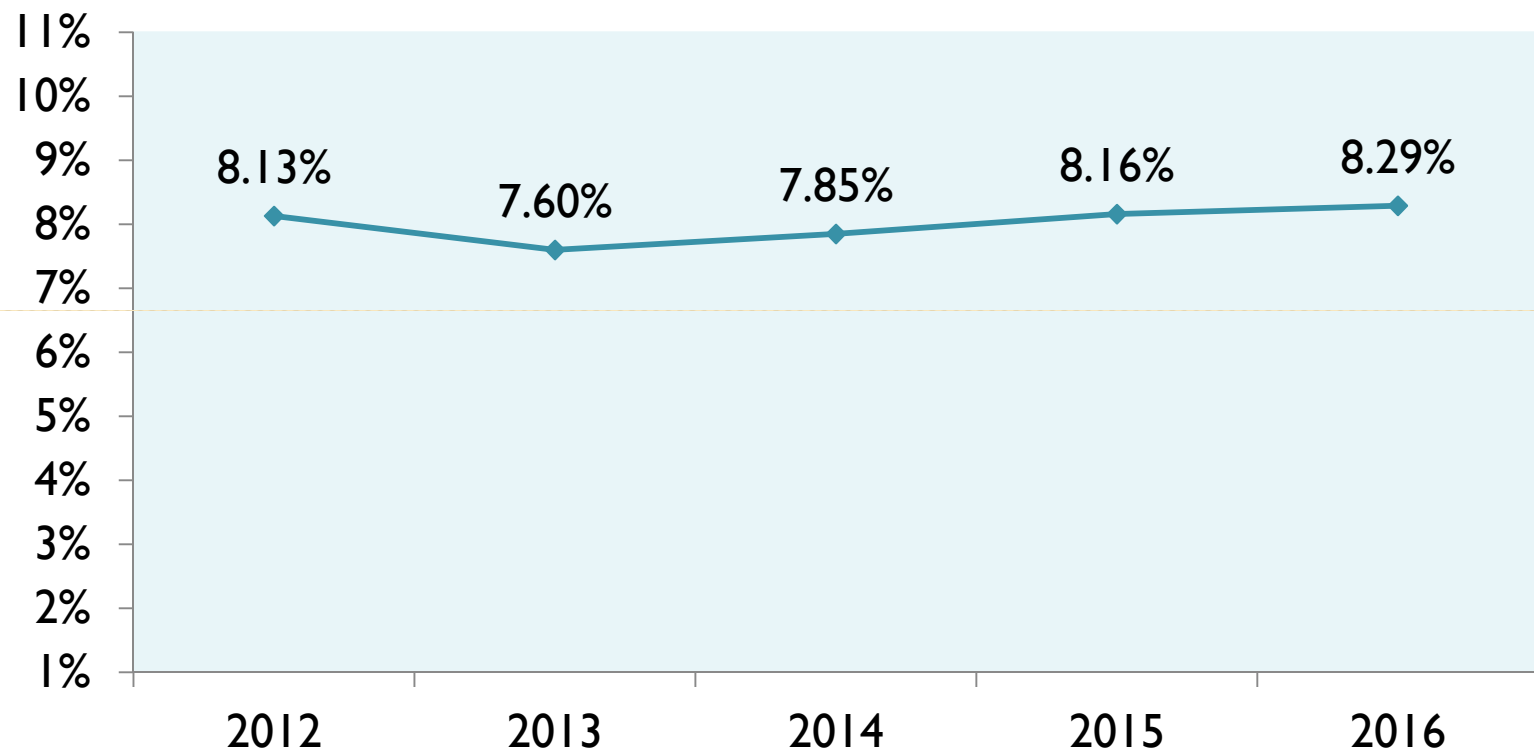
2016

- ABRAXAS PETROL
- BILL BARRETT
- **BONANZA CREEK ENERGY**
- CONTINENTAL RES
- EARTHSTONE ENERGY
- EMERALD OIL INC
- ENCANA CORP
- LEGACY RESERVES
- LINN ENERGY
- MATADOR RESOURCES
- NEWFIELD EXPLORATION
- PIONEER NATURAL RES
- QEP RESOURCES
- RESOLUTE ENERGY CORP
- ROYAL ENERGY INC
- **SM ENERGY CO**
- ULTRA PETROLEUM CORP
- WARREN RESOURCES
- WHITING PETROLUUM
- WPX ENERGY, INC

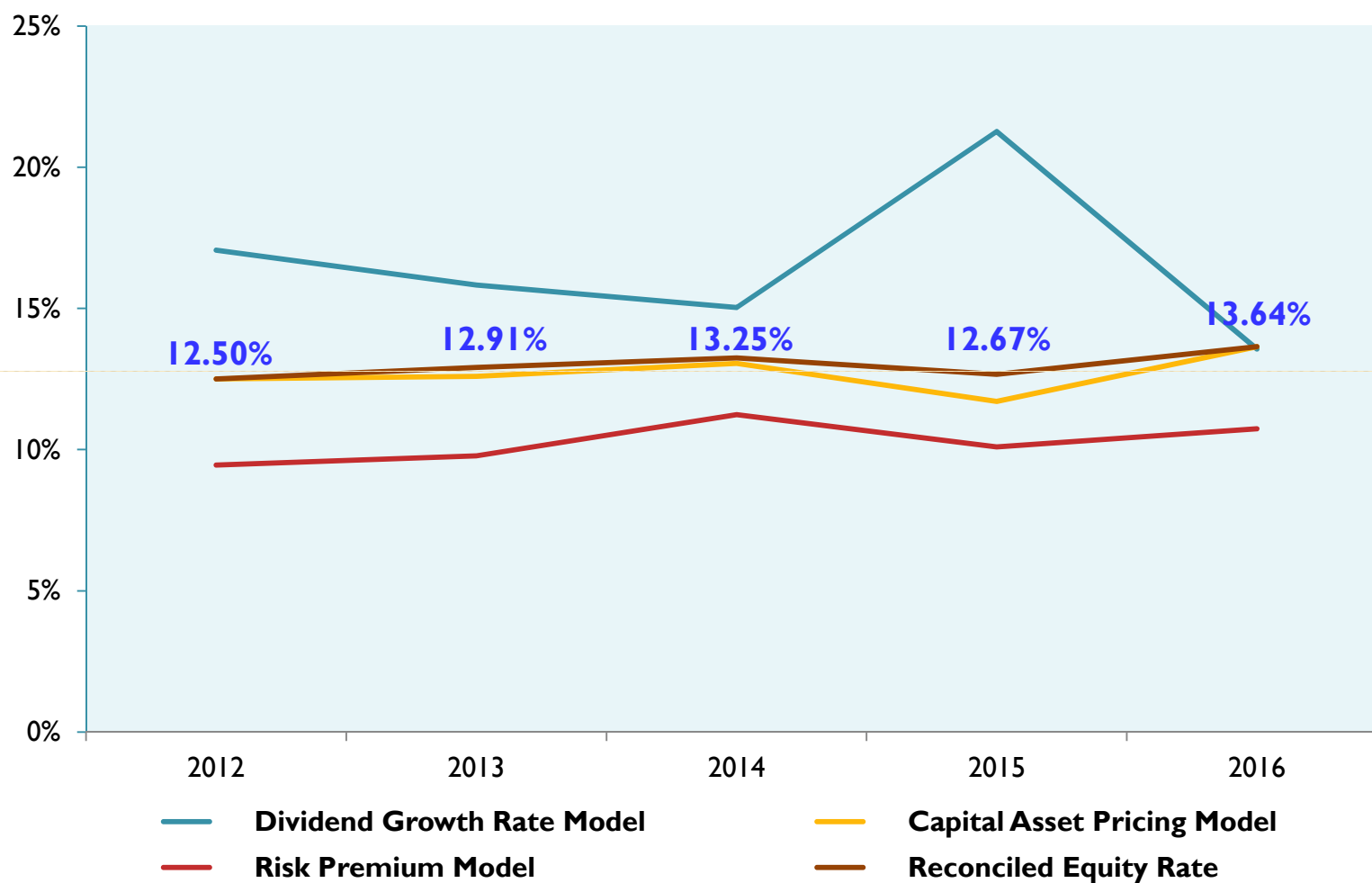
Five Year Capital Structure History



Five Year Debt Rate History



Five Year Equity Rate History



Production/WD Discount Rate

WEIGHTED AVERAGE COST OF CAPITAL DISCOUNT RATE CALCULATION			
	RATE	CAPITAL STRUCTURE	WEIGHTED RATE
DEBT RATE (BI)	8.29%	45%	3.73%
EQUITY RATE	13.64%	55%	7.50%
BEFORE TAXES WACC			11.23%



Oil & Gas Gathering

Discount Rate

Comparable Companies

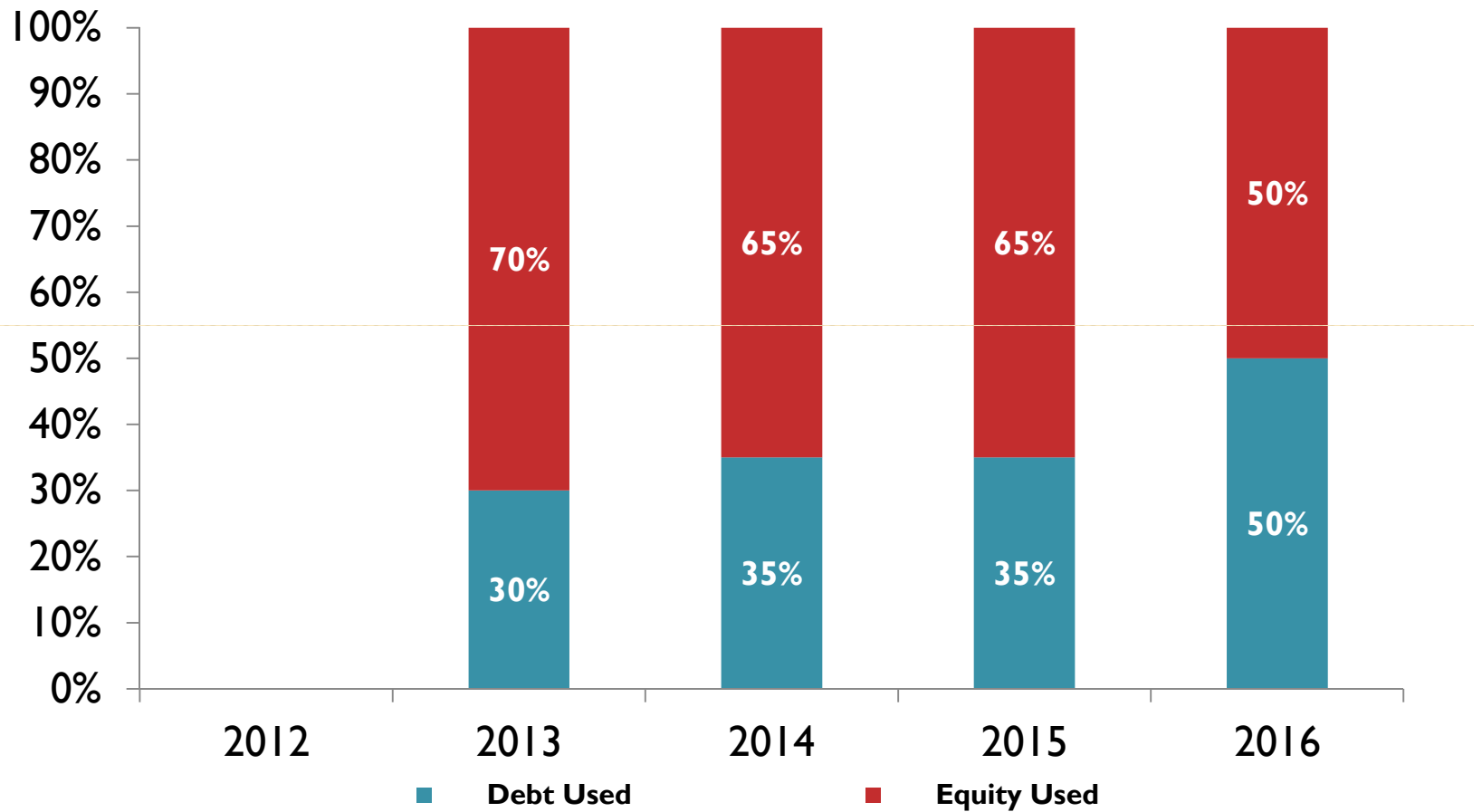
2015

- ACCESS MIDSTREAM
- BLUEKNIGHT ENERGY
- CRESTWOOD MIDSTREAM
- ENLINK MIDSTREAM
- ONEOK INC
- PLAINS ALL AMER. PIPE.
- REGENCY ENERGY
- TESORO LOGISTICS LP
- WESTERN GAS PARTNERS
- WILLIAMS COS

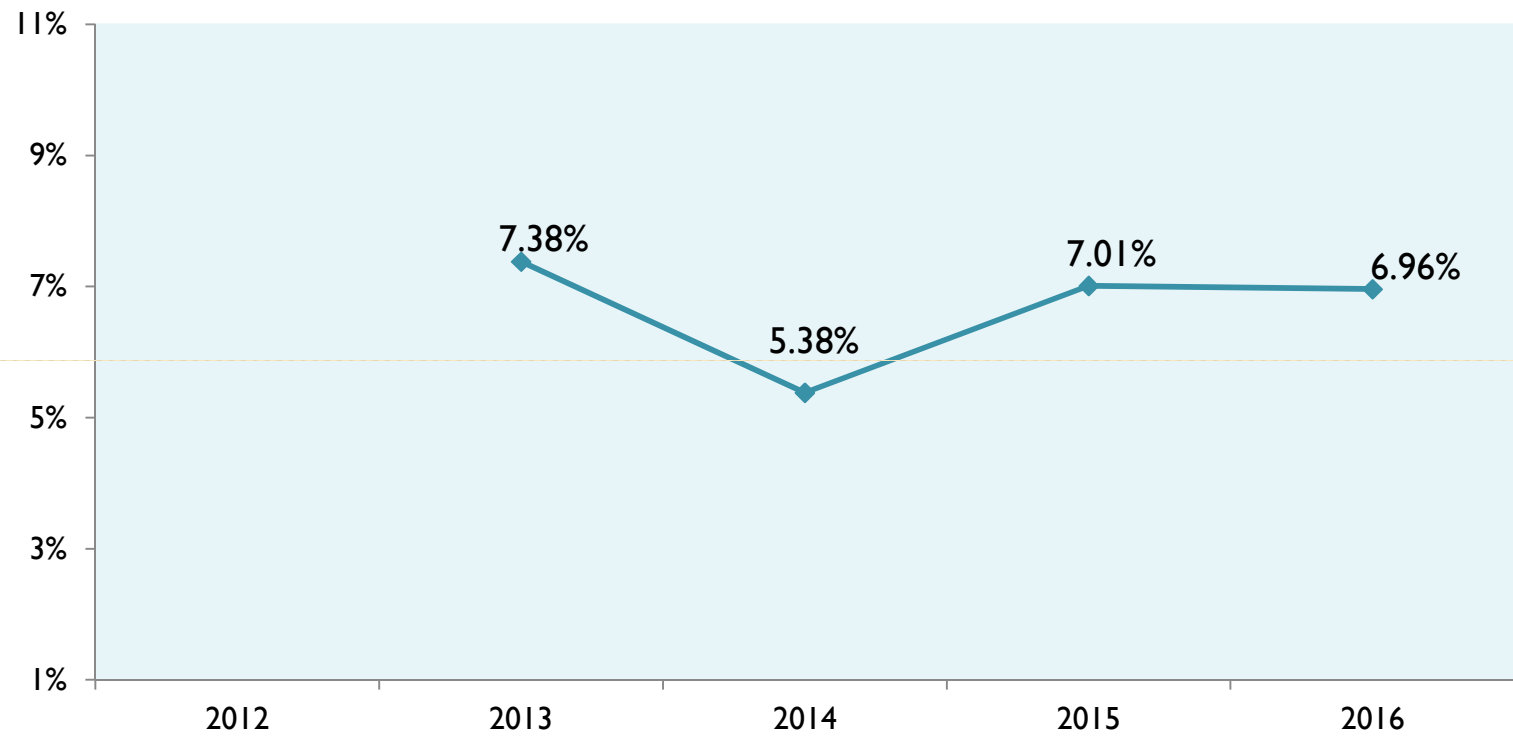
2016

- AZURE MIDSTREAM PTRS
- CRESTWOOD EQUITY PTRS
- ENERGY TRANSFER PTRS
- ENLINK MIDSTREAM PTRS
- ONEOK INC
- PLAINS ALL AMER. PIPE.
- SUMMIT MIDSTREAM PTRS
- TALLGRASS ENERGY PTRS
- WESTERN GAS PTRS
- WILLIAMS COS

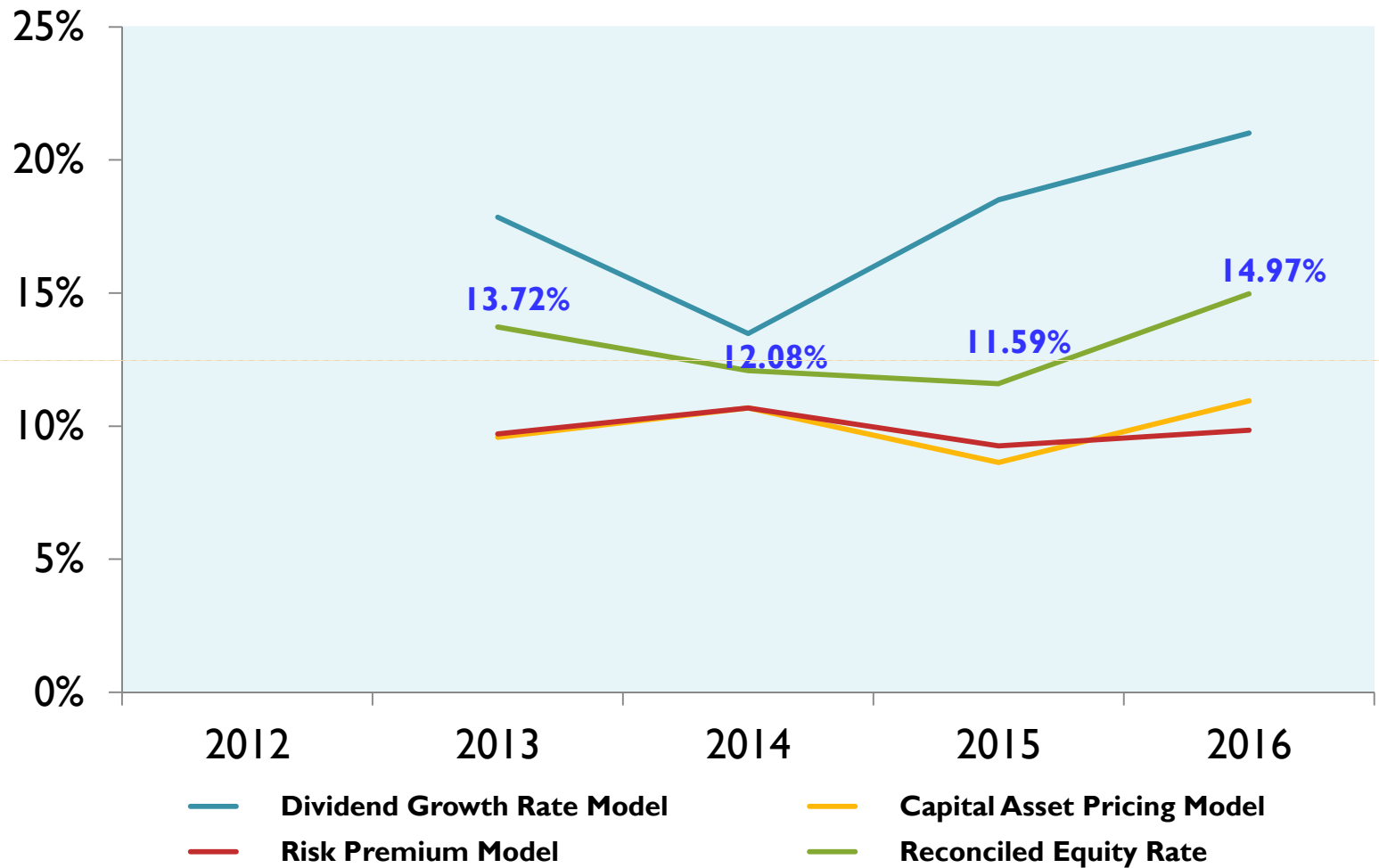
Four Year Capital Structure History



Four Year Debt Rate History



Four Year Equity Rate History

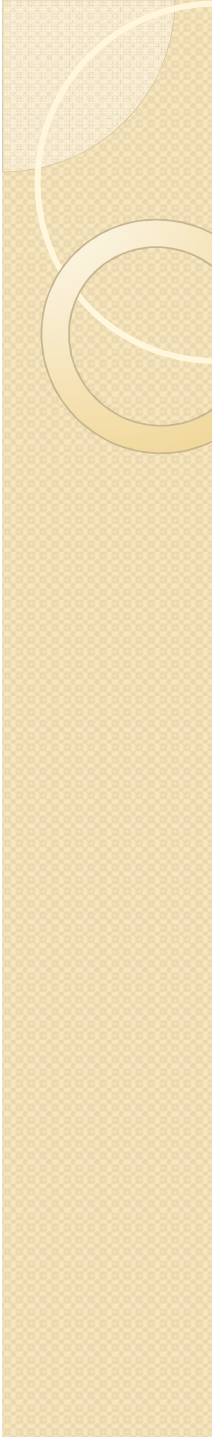


Gathering Discount Rate

WEIGHTED AVERAGE COST OF CAPITAL DISCOUNT RATE CALCULATION			
	RATE	CAPITAL STRUCTURE	WEIGHTED RATE
DEBT RATE (BaI)	6.96%	50%	3.48%
EQUITY RATE	14.97%	50%	7.49%
BEFORE TAXES WACC			10.97%



Oil Price Forecast



**“Although I often hear
‘hope is not a strategy,’ it
sure beats ‘no hope,’ at
least when it comes to
morale.”**

-John England, Deloitte



R884-24P-10

“Product Price”

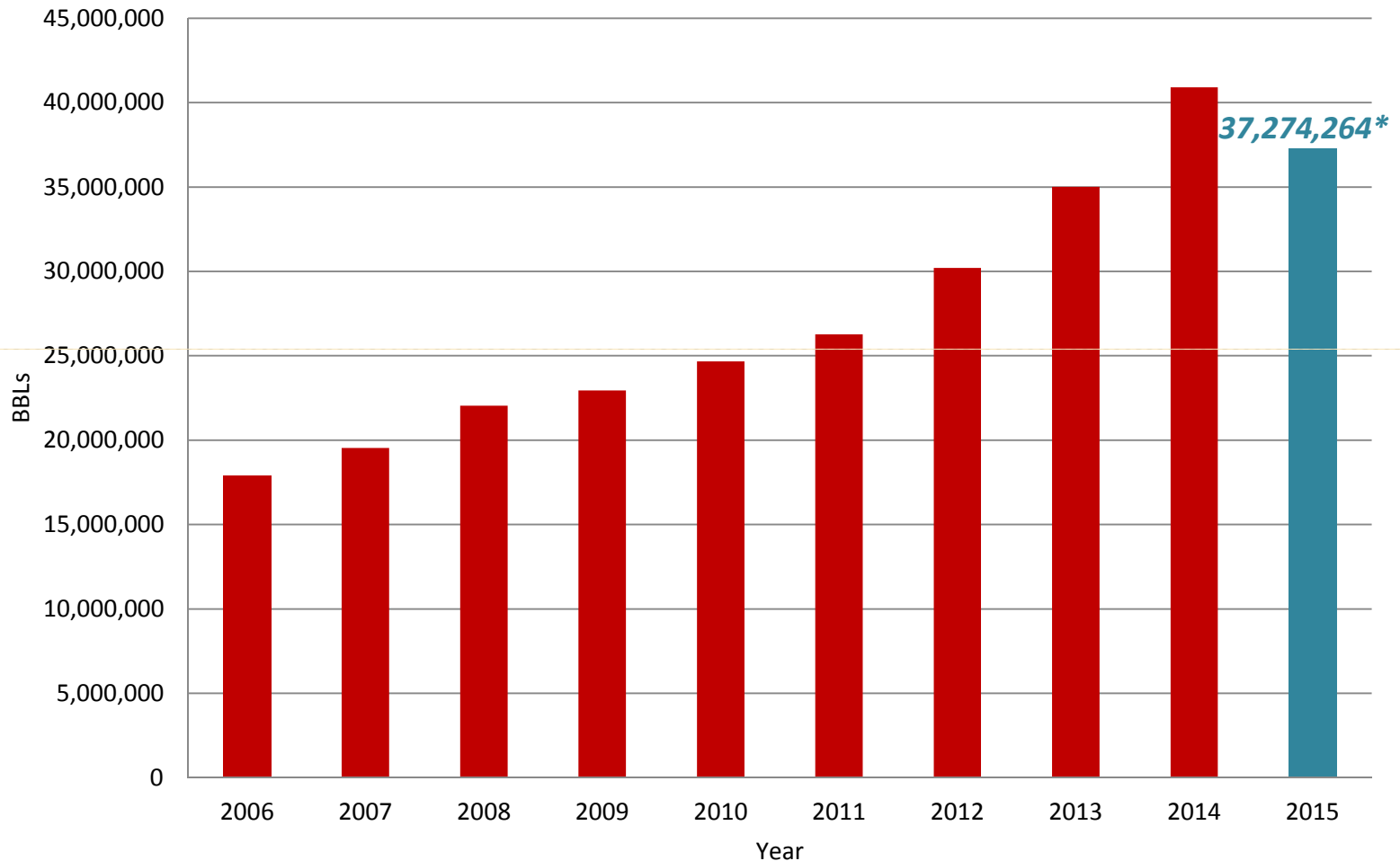
- Starting price is the weighted average posted price of the previous year

2015 Highlights

- Global supply
 - Oversupply contributed to low oil prices.
 - Saudis increased production by 0.3 mil b/d.
 - Conflict: Saudi-Iran
- WTI-Brent spread
 - Averaged less than \$4/bbl.
- US oil production
 - Company scale back.
 - Significant decline in total rig counts in 2015.
- Oil prices
 - Ended below \$40/bbl, the lowest since 2009.

2015 Utah – Oil Production

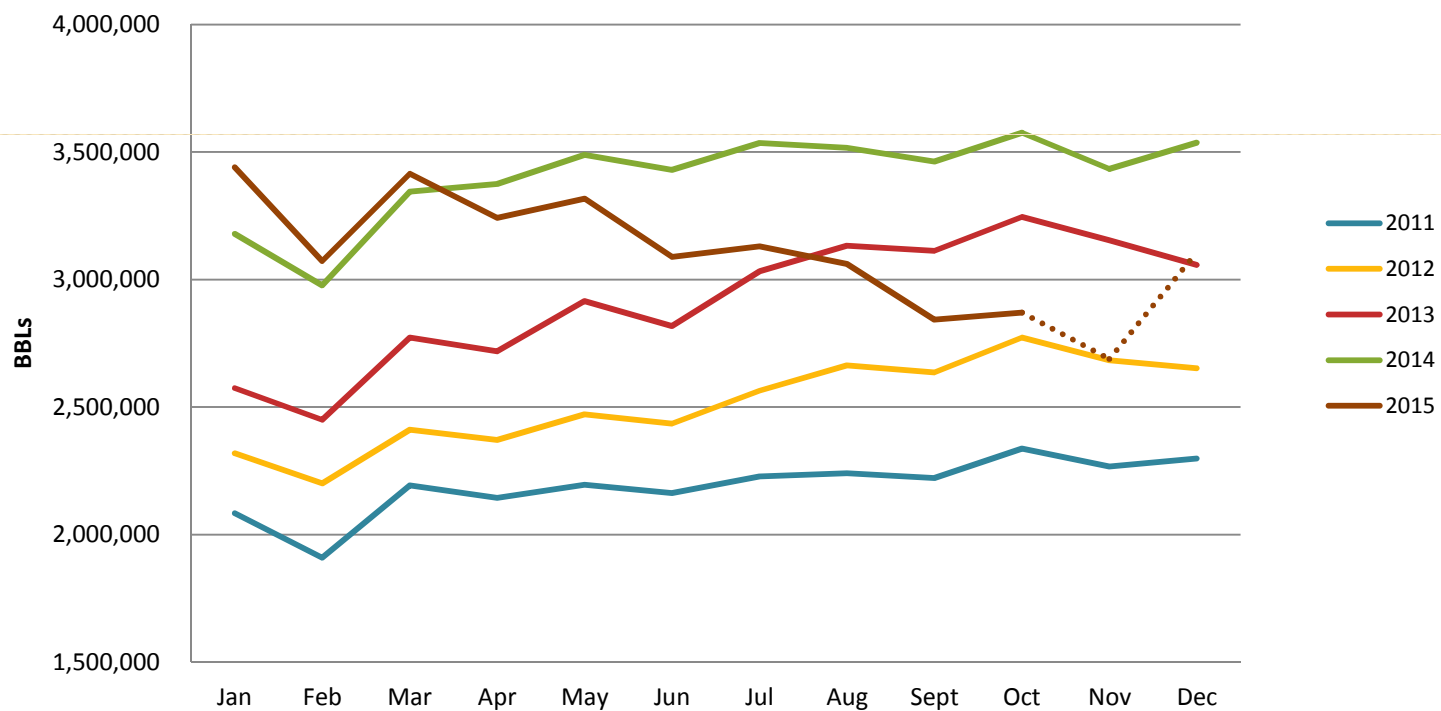
- by Year -



***The production is annualized for 2015. DOGM
Production reports available up to November 2015.**

2015 Utah – Oil Production

- by Month -



2016 Expectations

- Supply
 - Expected to steadily decline
- Demand
 - Slowing
- U.S. Production
 - 9.2 mil b/d 2015
 - To 8.7 mil b/d 2016
 - To 8.5 mil b/d 2017

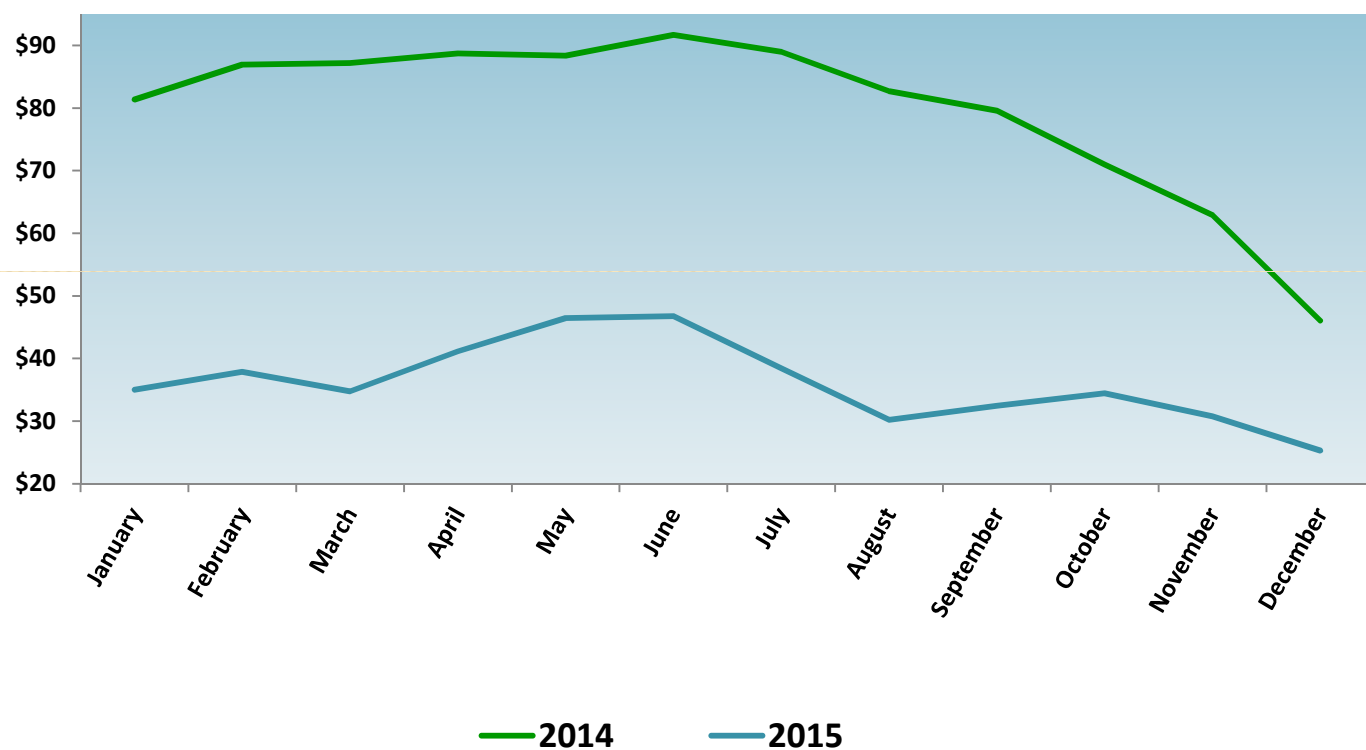
PARADOX BASIN/SWEET - "GIANT"

MONTH	POSTING DAYS	WEIGHTED PRICE 2015	PREVIOUS YEAR 2014	% CHANGE
January	31	\$34.98	\$81.34	-57%
February	28	\$37.86	\$86.96	-56%
March	31	\$34.76	\$87.18	-60%
April	30	\$41.12	\$88.72	-54%
May	31	\$46.47	\$88.36	-47%
June	30	\$46.76	\$91.70	-49%
July	31	\$38.44	\$88.98	-57%
August	31	\$30.19	\$82.71	-63%
September	30	\$32.43	\$79.59	-59%
October	31	\$34.42	\$70.97	-52%
November	30	\$30.75	\$62.90	-51%
December	31	\$25.29	\$46.02	-45%
Year End Weighted Monthly Average Price (\$/bbl)		\$36.12	\$79.62	-55%

Source: Western Refining

WEIGHTED CRUDE OIL POSTED PRICES

Paradox Basin/Sweet -“Giant”

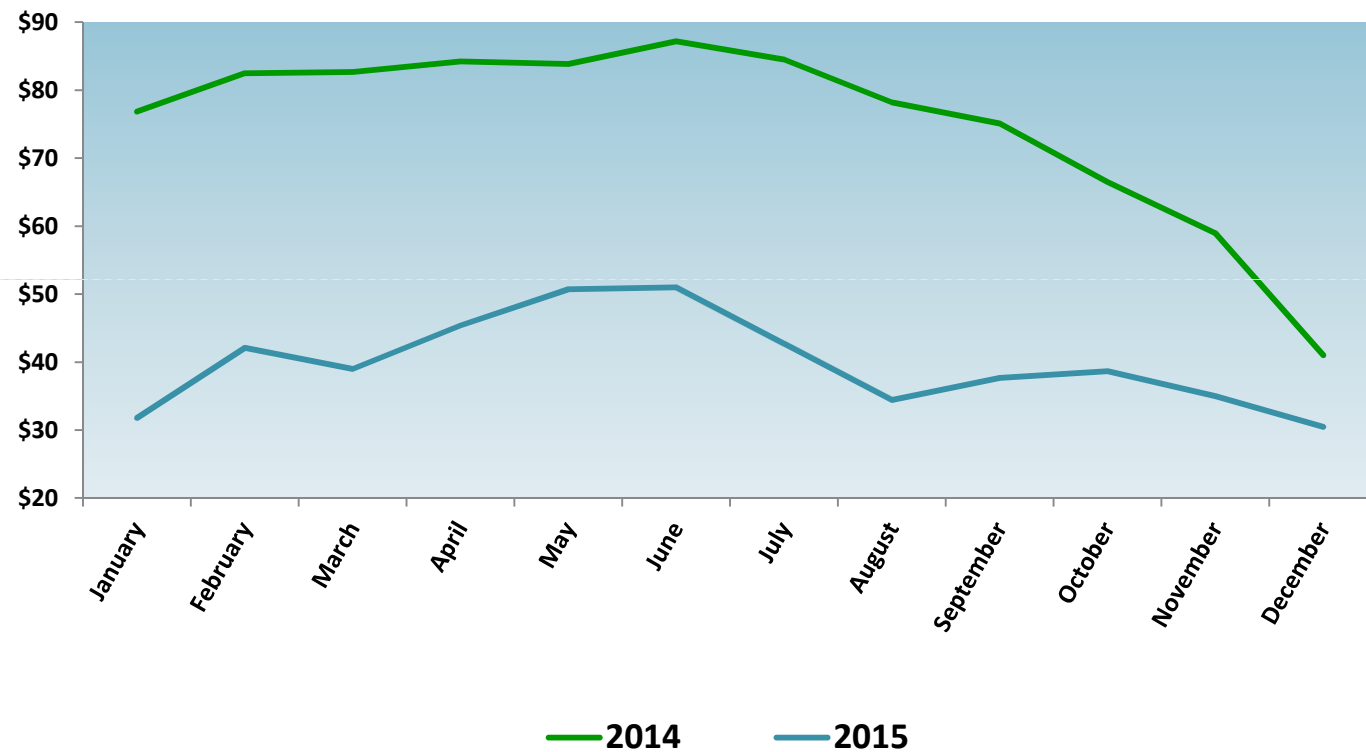


UINTA BASIN BLACK WAX - "CHEVRON"

MONTH	POSTING DAYS	WEIGHTED PRICE 2015	PREVIOUS YEAR 2014	% CHANGE
January	31	\$31.77	\$76.84	-59%
February	28	\$42.11	\$82.46	-49%
March	31	\$39.01	\$82.68	-53%
April	30	\$45.37	\$84.22	-46%
May	31	\$50.72	\$83.84	-40%
June	30	\$51.01	\$87.20	-42%
July	31	\$42.69	\$84.48	-49%
August	31	\$34.44	\$78.21	-56%
September	30	\$37.68	\$75.11	-50%
October	31	\$38.67	\$66.47	-42%
November	30	\$35.00	\$58.94	-41%
December	31	\$30.46	\$41.03	-26%
Year End Weighted Monthly Average Price (\$/bbl)		\$39.91	\$75.12	-47%

WEIGHTED CRUDE OIL POSTED PRICES

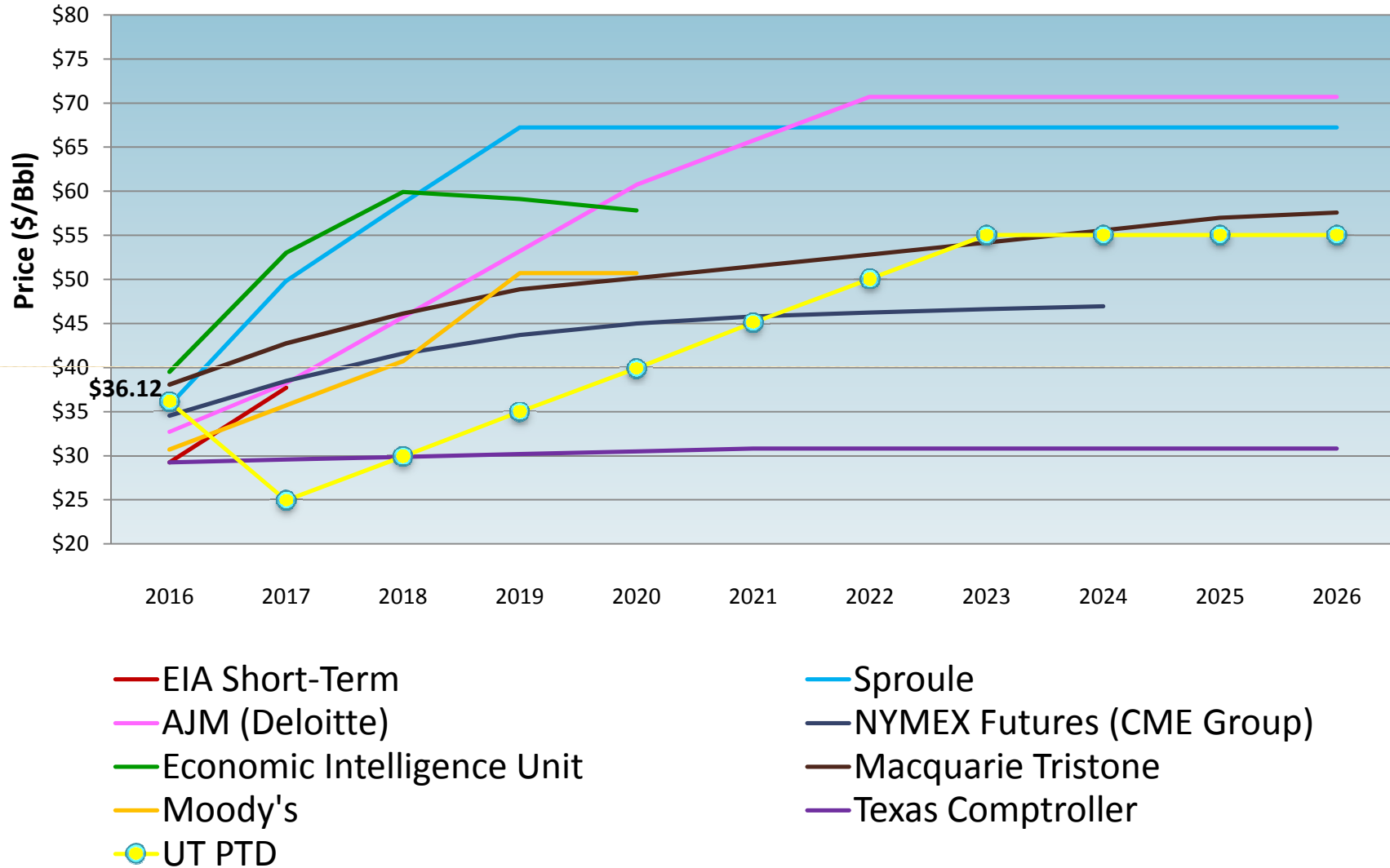
Uinta Basin Black Wax



Sources for Oil Price Forecasting

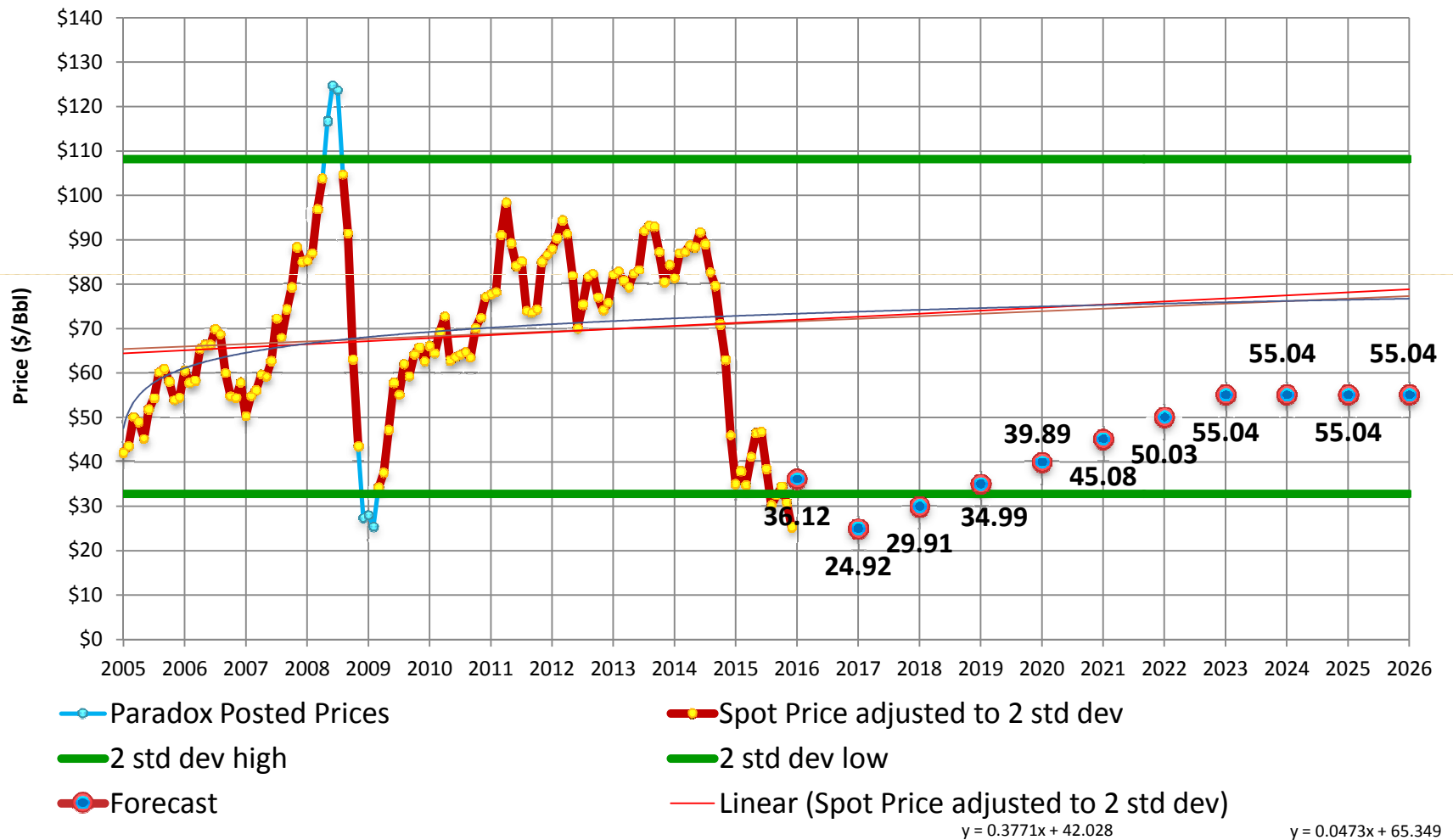
- ▶ U.S. EIA – United States Energy Information Administration
 - Short Term Outlook (STO)
 - Annual Energy Outlook (AEO)
 - *AEO is not available until June 2016
- ▶ EIU – Economist Intelligence Unit
 - Economic and Commodity Prices Forecast
- ▶ NYMEX (CME Group) – New York Mercantile Exchange for futures prices
- ▶ Sproule Associates – Petroleum consultants annual forecast
- ▶ AJM Deloitte – Petroleum consultant company annual forecast
- ▶ Texas Comptroller –Pritchard & Abbott, Inc. Method
 - Price Adjustment Factor(PAF) & Producer Price Index(PPI)
- ▶ Macquarie Tristone – Energy lenders' price forecast survey
- ▶ Moody's –Investor service forecast

2016 Paradox Oil Price Forecast



2016 Paradox Oil Price Forecast

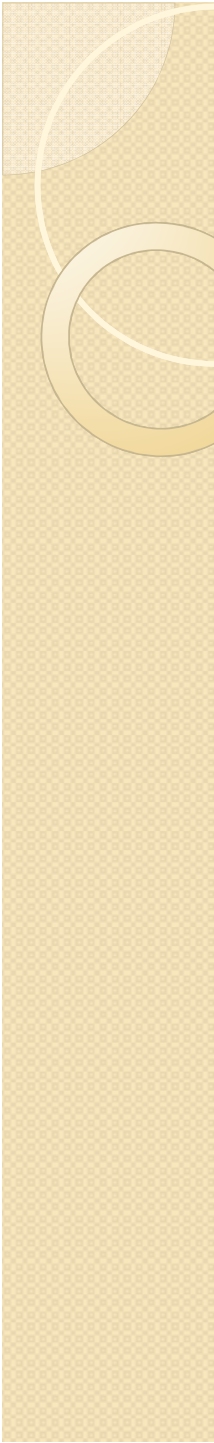
2 Std deviation
High & Low Out



2016 Oil Price Forecast

Paradox Basin Summary												
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Avg of 2014 Mthly Prices	79.92											
Forecast with High & Low (2 SD)		36.12	24.92	29.91	34.99	39.89	45.08	50.03	55.04	55.04	55.04	55.04
% Change			-31%	20%	17%	14%	13%	11%	10%	0%	0%	0%

Black Wax Summary												
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Avg of 2014 Mthly Prices	75.12											
Forecast with High & Low (2 SD)		39.91	27.54	33.05	38.66	44.08	49.81	55.28	60.81	60.87	60.81	60.81
% Change			-31%	20%	17%	14%	13%	11%	10%	0%	0%	0%



**“The endgame is an oil
and gas industry that will
be stronger, leaner, and
built to last.”**

-John England, Deloitte



Natural Gas Price Forecast

Natural Gas Price Forecast



R884-24P-10

“Product Price”

- Starting price, as defined by Utah Tax Code, is:
 - (1) If sold under contract, the price shall be the stated price.
 - (2) If sold otherwise, the price shall be the weighted average price.



2015 Highlights

- U.S. hydrocarbon production continues to exceed that of both Russia & Saudi Arabia
- Natural gas overtook coal as the top source of U.S. electric power generation for the first time ever
- Gas is the fastest growing fossil fuel at 1.8% per annum, with its share in primary energy gradually increasing

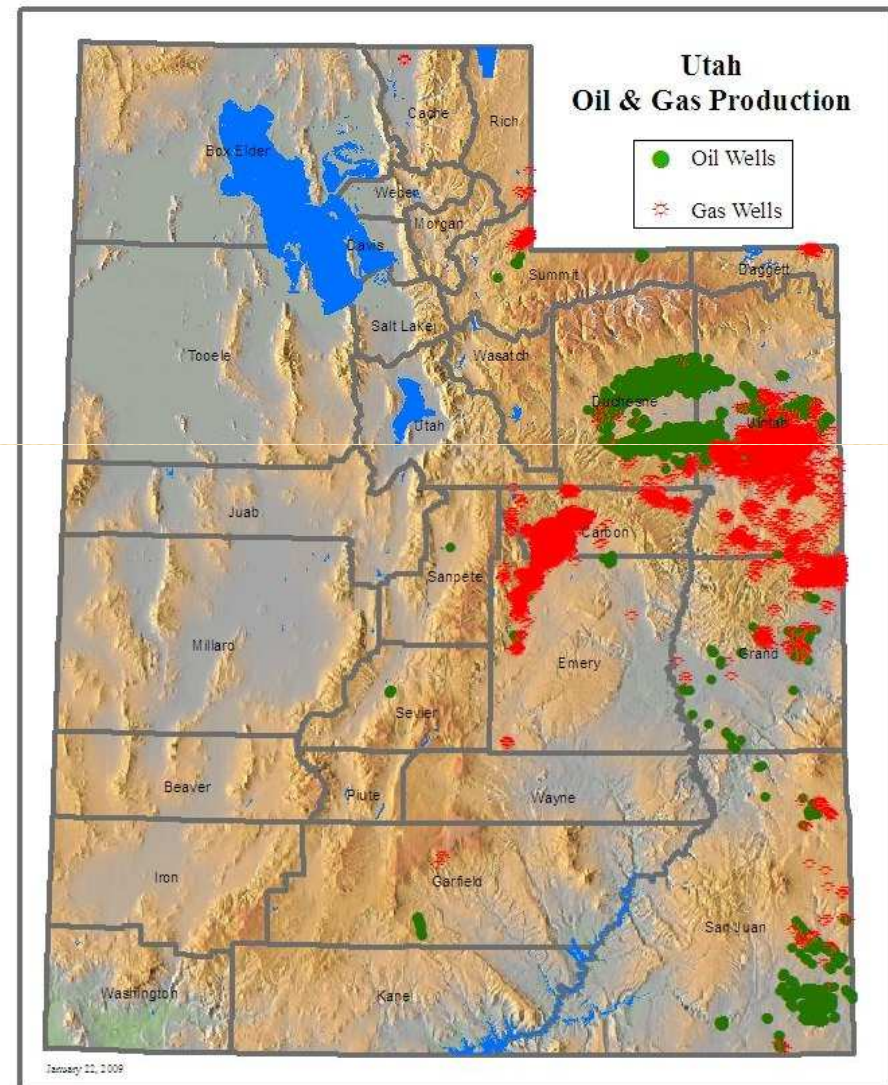
Utah - 2015

Data Analysis:

- Supply
- Drilling
- Production

Other Variables:

- Consumption
- Weather
- Economy



2015 Utah - Permits

By County:

	2015	2014	2013	2012
Carbon	26	34	7	93
Duchesne	77	511	794	745
Emery	0	0	6	1
Grand	9	29	12	17
Juab	1	1	1	1
Millard	1	2	2	0
San Juan	2	7	50	34
Sevier	1	2	1	1
Uintah	451	798	737	1213
Sub-Total	568	1384	1610	2105
State Totals	570	1388	1611	2105

By Month:

	2015	2014	2013	2012
January	88	124	137	106
February	84	48	77	171
March	114	84	231	102
April	38	118	99	83
May	32	55	67	287
June	56	77	184	109
July	24	157	94	116
August	25	154	129	306
September	29	118	86	203
October	54	99	151	225
November	12	149	243	191
December	14	205	113	206
State Totals	570	1388	1611	2105

Source: DOGM

2015 Utah - Drilling

By County:

	2015	2014	2013	2012
Box Elder	0	0	0	6
Carbon	8	26	1	19
Daggett	0	0	1	0
Duchesne	37	433	442	420
Emery	0	1	1	1
Grand	0	14	7	13
Juab	1	1	0	1
Millard	1	2	2	0
San Juan	0	4	15	14
Sevier	1	1	0	1
Uintah	101	407	518	635
Sub-Total	151	889	987	1107
State Totals	151	890	988	1107

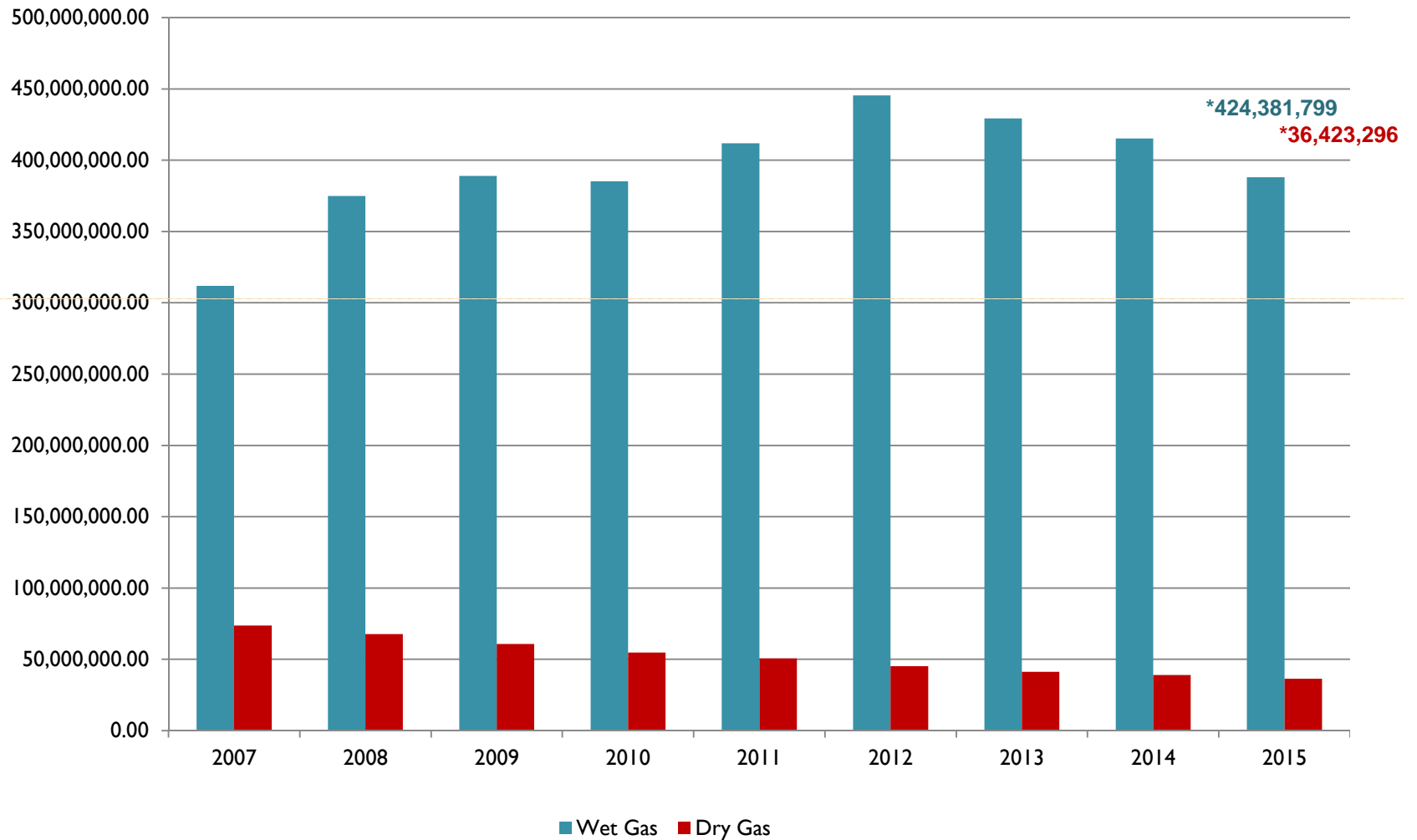
By Month:

	2015	2014	2013	2012
January	24	87	72	89
February	2	72	86	99
March	25	70	79	108
April	11	86	76	103
May	16	81	87	112
June	25	71	58	89
July	15	80	84	113
August	11	70	89	98
September	7	72	90	106
October	12	76	68	75
November	2	63	100	50
December	1	62	99	65
State Totals	151	890	988	1107

Source: DOGM

2015 Utah - Production

By Year:

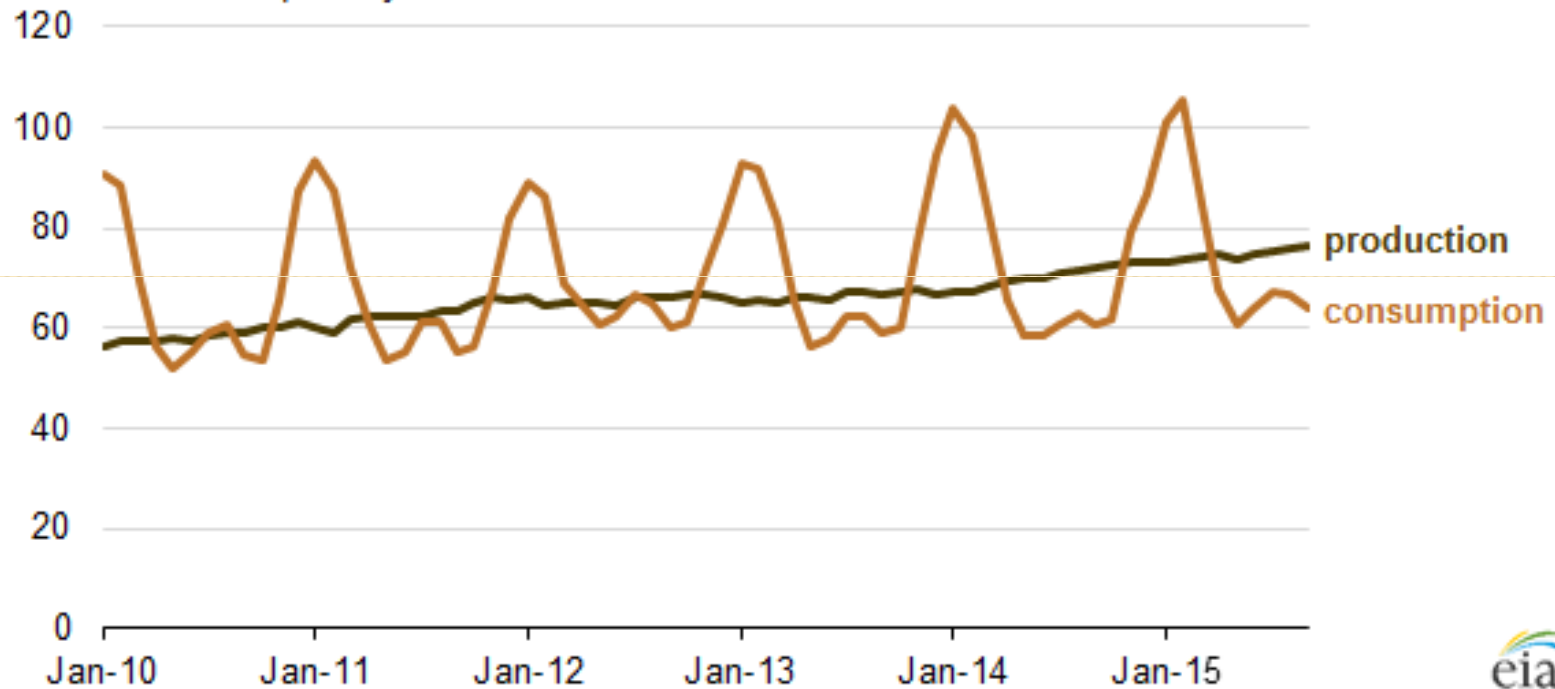


*The production for 2015 is annualized

Source: DOGM

2015 National Production

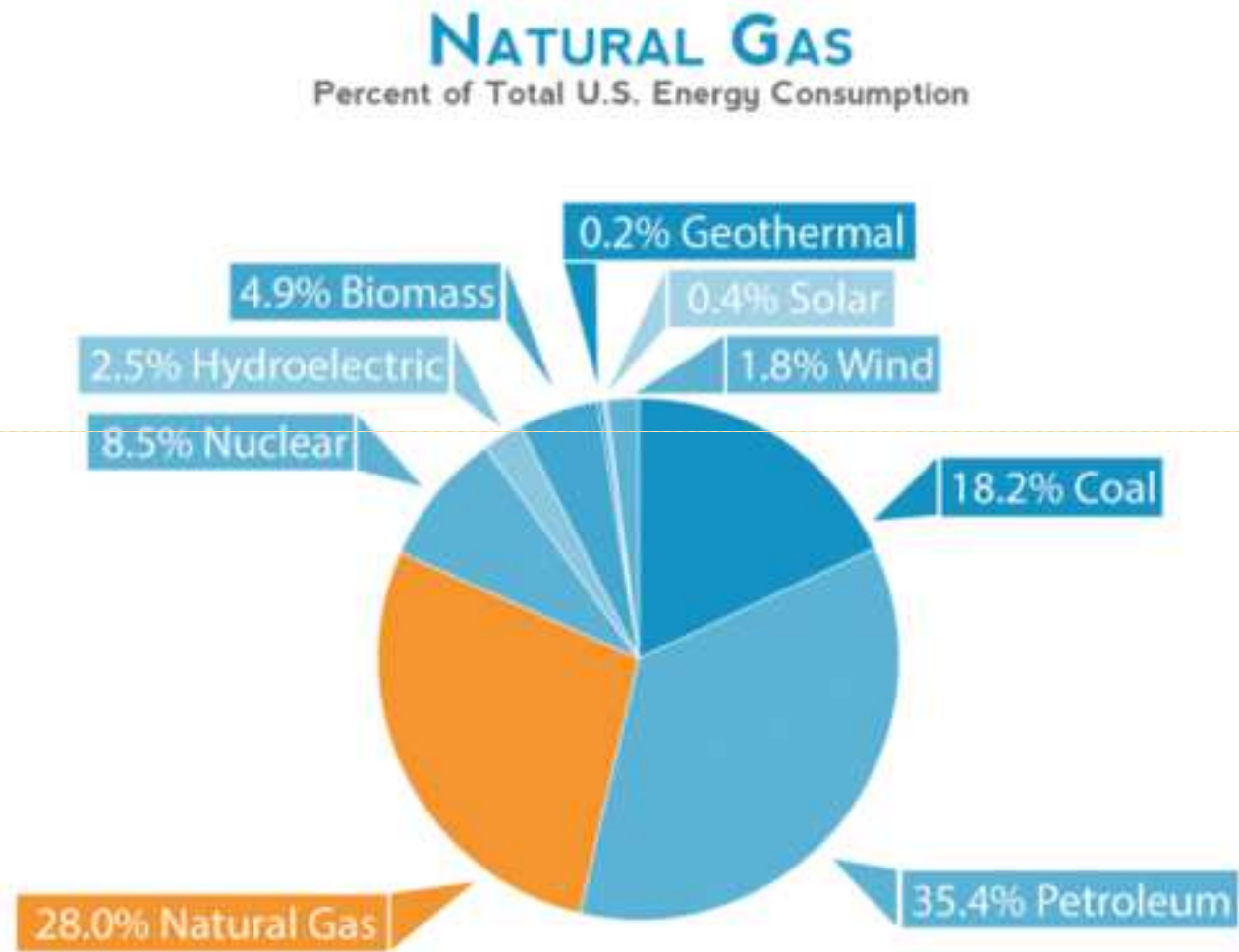
U.S. total monthly natural gas production and consumption (Jan 2010 - Sep 2015)
billion cubic feet per day



Source: U.S. Energy Information Administration, [Natural Gas Monthly](#)



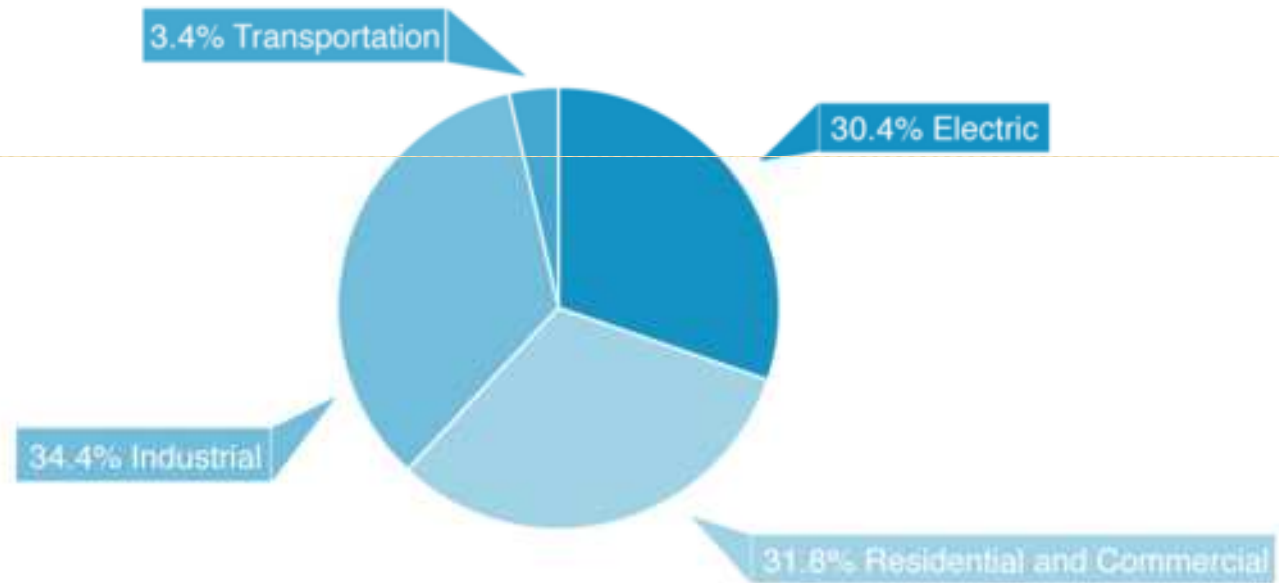
Domestic Energy Consumption



Source: EIA, MER, March 2015

Domestic Energy Consumption

NATURAL GAS U.S. Consumption by Sector



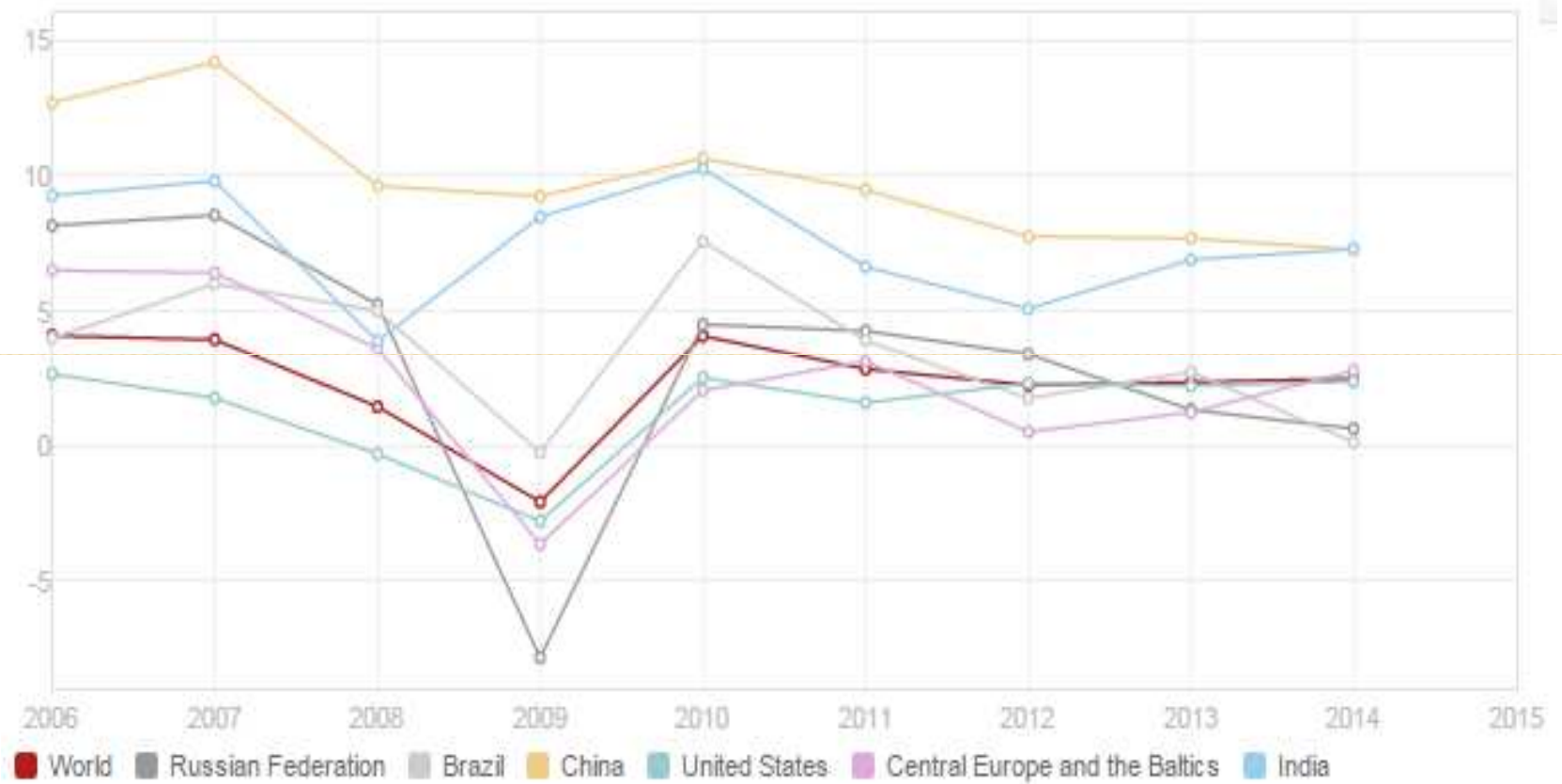
Source: EIA, MER, April 2015

Weather

- Sources & Predictions:
 - NOAA/National Weather Service Outlook:
 - Winter forecast
 - Above-normal temperatures across the continental U.S.
 - The Farmers Almanac
 - Winter forecast 2016
 - Central U.S. will see near normal winter temperatures
 - South Central States will see a cool to cold winter, nothing extreme
 - Western and South Western States can expect milder than normal winter temperatures

Economy

GDP Growth

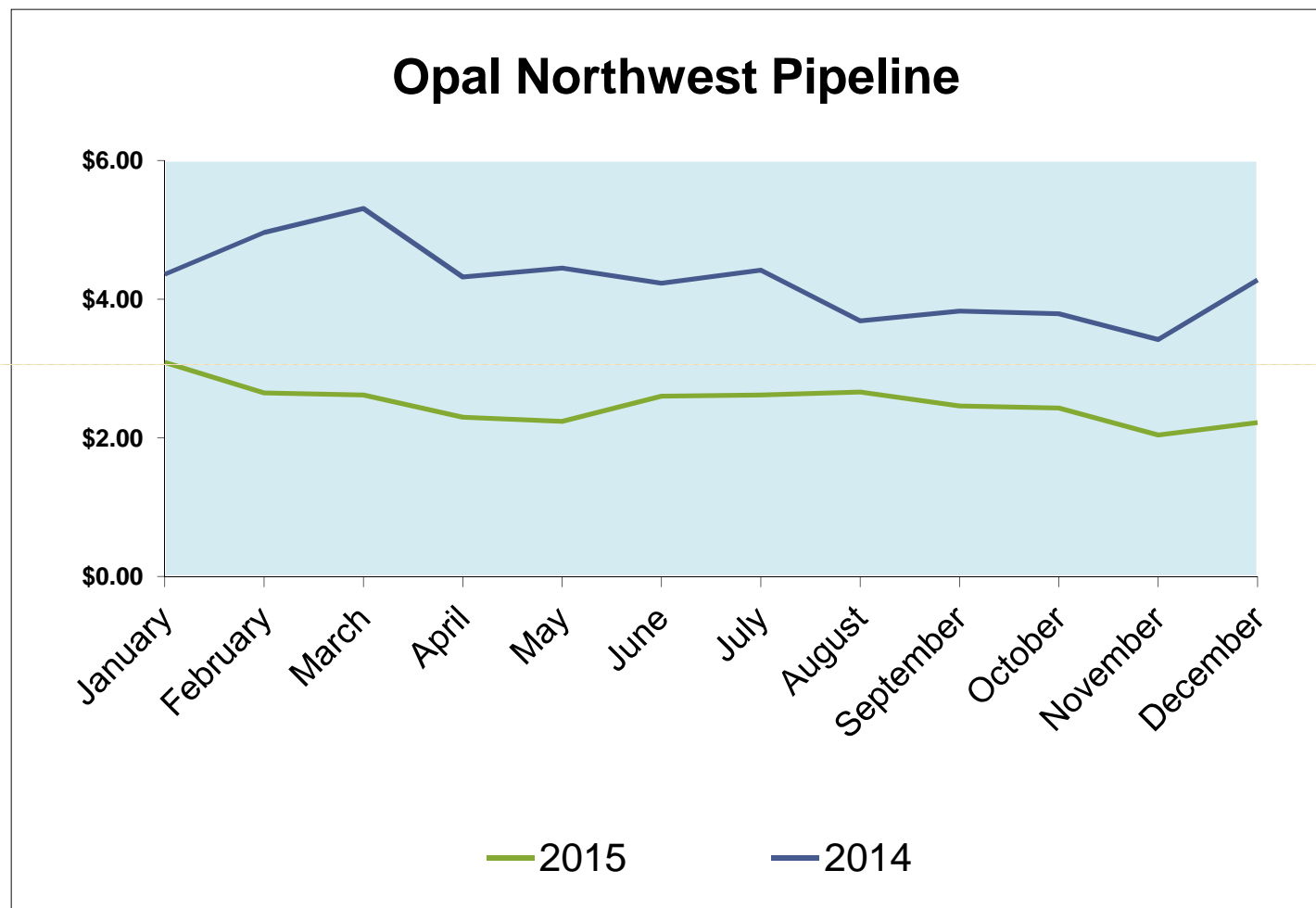


Year End Percent Change

NORTHWEST PIPELINE - OPAL, WYOMING

MONTH	POSTING DAYS	WEIGHTED PRICE 2015	PREVIOUS YEAR 2014	% CHANGE
January	31	\$3.09	\$4.36	-29%
February	28	\$2.65	\$4.96	-47%
March	31	\$2.62	\$5.31	-51%
April	30	\$2.30	\$4.32	-47%
May	31	\$2.24	\$4.45	-50%
June	30	\$2.60	\$4.23	-39%
July	31	\$2.62	\$4.42	-41%
August	31	\$2.66	\$3.69	-28%
September	30	\$2.46	\$3.83	-36%
October	31	\$2.43	\$3.79	-36%
November	30	\$2.04	\$3.42	-40%
December	31	\$2.22	\$4.28	-48%
Year End Weighted Monthly Average Price (\$/MCF)		\$2.49	\$4.26	-41%

Weighted Spot Prices



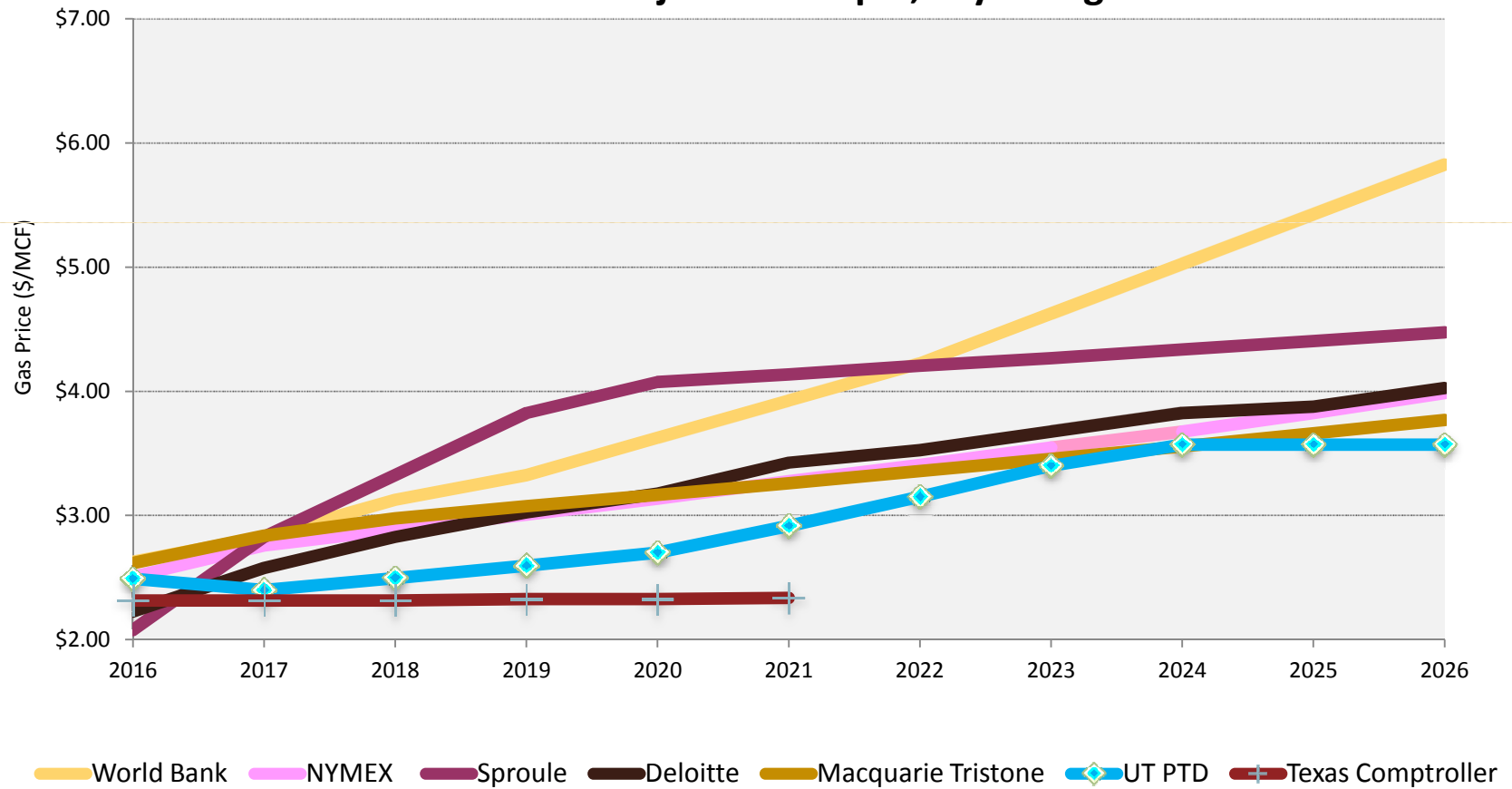


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- ▶ Texas Comptroller
- ▶ Macquarie Tristone – Energy lenders' price forecast survey
- ▶ World Bank– Financial and technical assistance group

2016 Gas Price Forecast Adjusted to Opal, Wyoming

2016 Gas Price Estimate Comparison Adjusted to Opal, Wyoming

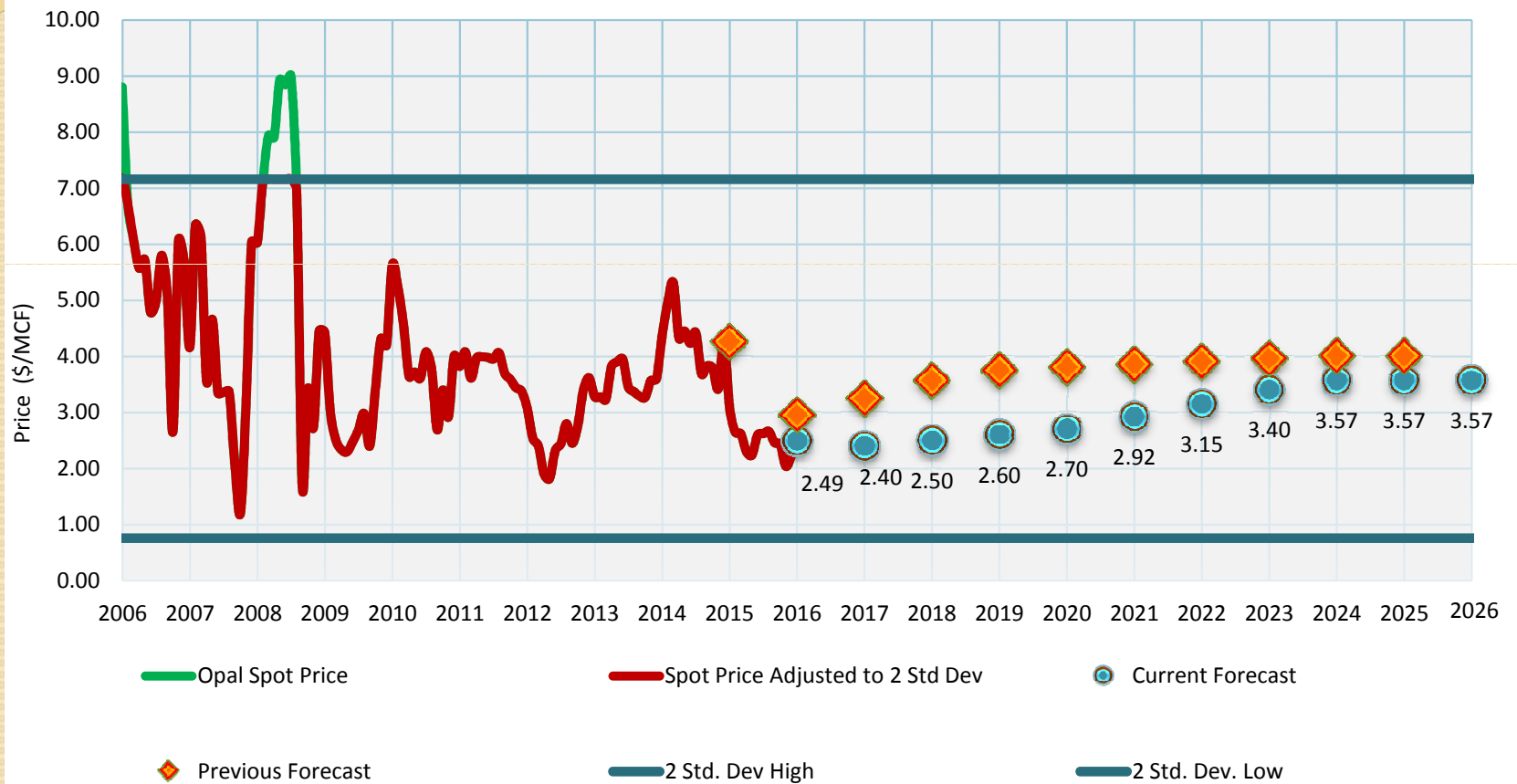


2016 Gas Price Forecast

Opal, Wyoming												
Summary												
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Start Price	4.26											
Forecast with High & Low Out		2.49	2.40	2.50	2.60	2.70	2.92	3.15	3.40	3.57	3.57	3.57
% Change		-6.7%	-3.6%	4.0%	4.0%	4.0%	8.0%	8.0%	8.0%	5.0%	0%	0%

2016 Gas Price Forecast

2016 - Gas Price Outlook
2 Standard Deviations
High and Low Out



2016 Expectations

- Supply
 - Oversupply, adequate for upcoming demand
- Demand
 - Traditional US gas markets are expanding
- Production
 - 2016 is forecast to be the 11th consecutive year of production gains